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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,233	01/30/2009	Michael L Goller	13760/A407US1	7537

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KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER	
BARHAM, BETHANY P	

ART UNIT	PAPER NUMBER
1615	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,233	GOLLER ET AL.	
	Examiner	Art Unit	
	BETHANY BARHAM	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 July 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1,4-7,9-30,33-36 and 71-75* is/are pending in the application.

5a) Of the above claim(s) *29,30,33,36 and 73-75* is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1,4-7,9-28,34,35,71 and 72* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☒ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/03/06, 10/14/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Summary

Receipt of the IDS's filed on 05/03/06 and 10/14/09 is acknowledged. The NPL "CA" could not be considered since it was not provided to the Office as "page S144", which contains the cited abstract is missing from document supplied (i.e. only pages S1-S90 were provided). Applicant's response and claim amendments filed on 07/20/11 are also acknowledged. It is noted that Applicant states in their response that claim 28 is cancelled, but then includes in the claims an amendment to claim 28. As such claims 1, 4-7, 9-30, 33-36 and 71-75 are pending.

Election/Restrictions

Applicant's election with traverse of Group I (claims 1, 4-7, 9-27, 29-30 and 33-36, note the Examiner believes claim 28 is also to be included) in the reply filed on 07/20/11 is acknowledged. Applicant argues that composition, medicament and method claims as amended share the same special technical feature. The Examiner respectfully points out that the restriction/election of species was based on there being no special technical feature for Groups I-V as originally presented. Upon further consideration the Examiner will examine Groups I and II together and notes that the method claims are eligible for rejoinder upon allowable subject matter in the product claims under examination. The Applicant's arguments with respect to Groups III-IV is not found persuasive because Groups I-II and III-VII differ in scope and have different modes of

operation, effects, and functions. Specifically, as pointed out in the 04/26/11 Election/Restriction requirement, the common technical feature of instant claim 1 as originally filed is found in the prior art US 6,645,466 which teaches a powder comprising steroids such as loteprednol etabonate with a mean volume diameter of less than 10 microns, preferably 1-6 microns and an excipient a particle size of 10-500 microns (abstract, col. 6-col. 8). Further, Applicant has elected etiprednol dicloacetate (EDA) of Formula I as the soft steroid for search and examination purposes. As such, claims 29-30, 33, 36 and 73-75 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species and invention, there being no allowable generic or linking claim. Claims 1, 4-7, 9-28, 34-35 and 71-72 will be examined in the instant application. Applicant timely traversed the restriction (election) requirement in the reply filed on 07/20/11. The requirement is still deemed proper and is therefore made FINAL.

Finality of restriction requirement approved.

/Robert A. Wax/
Supervisory Patent Examiner, Art Unit 1615

NEW OBJECTIONS/REJECTIONS

The disclosure is objected to because of the following informalities (using the PGpub US 2009/0246281): etiprednol dicloacetate is misspelled as "didoacetate" at [0039, 0052] and loteprednol is misspelled as "lotiprednol" at [0052].

Further, the structure formula of loteprednol etabonate is incorrect in the disclosure at [0040]. See cited as interest "Loteprednol etabonate" from Chembase-

chemical compounds database which is included to show the correct structure. Note the difference in instant R6 and R11 groups compared to the actual structure from Chembase.

Appropriate correction is required.

DOUBLE PATENTING

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 4-7, 9-28, 34-35 and 71-72 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 8-12 of copending Application No. 10/594,473 in view of US 6,645,466 ('466). Both applications claim a medicament and a dry powder inhaler comprising EDA and lactose monohydrate.

Application No. 10/594,473 does not claim the size of the drug or the size of the carrier prior to the particulate medicament formulation, but does claim a particulate medicament formulation for dry powder inhalation of EDA and lactose monohydrate.

'466 teaches a dry powder formulation for inhalation containing a pharmaceutically ineffective carrier of non-inhalable particle size and a finely divided pharmaceutically active compound such as a corticosteroid of inhalable particle size (abstract; col. 6, lines 20-22 and 64-col. 7, line 3). The pharmaceutically active compound of inhalable particle size is at most 10microns, in particular at most 5microns (col. 4, lines 60-62). The carrier of non-inhalable particle size is 10-500microns in size, preferably 50-200microns (col. 7, lines 50-53) (according to the limitations of instant claims 1, 4-7, 9-28 and 71-72). The carrier of '466 includes lactose, sucrose, etc. and

particularly preferred is lactose monohydrate (col. 8, lines 1-7) (according to the limitations of instant claims 34-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine 10/594,473 and '466. A skilled artisan would know how to combine the known medicament and dry powder inhaler of 10/594,473 with the known technique of sizing the inhaled active and the non-inhaled carrier of '466 for a similar purpose of formulating a medicament and dry powder inhaler with predictable results of a dry powder inhaler containing a medicament of a <5micron sized drug EDA in combination with a 50-200micron size carrier of lactose monohydrate. Such a combination of a known product and a known technique for a similar purpose is within the purview of the skilled artisan would predictable results of dry inhaler containing a medicament of EDA of a particular particle size and lactose monohydrate of a particular particle size.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-7, 9-28, 34-35 and 71-72 are rejected under 35 U.S.C. 102(e) as being anticipated by US 2008/0131518 ('518).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The instant claims are drawn to a composition comprising particles of at least one soft steroid and at least one excipient, wherein said soft steroid is defined by the structural formula I (wherein etiprednol dicloacetate is the elected species)... wherein said at least one soft steroid particles have a volume mean diameter of less than about 20 micrometers and said at least one excipient particles have a volume mean diameter in the range of about 10 to about 1000 micrometers, wherein the volume mean diameter of the soft steroid particles is more than 3 times smaller than the mean diameter of the excipient particles.

- '518 teaches a particulate medicament comprising an active ingredient and a carrier (abstract). '518 teaches that the pharmaceutically active ingredient such as etiprednol dicloacetate (EDA) has a particle size of 50microns or less and 1-5microns are disclosed, with a minimum size of 0.5microns, which are mixed with carrier particles of 1micron-1cm, preferably 1micron-1000micron, more preferably 40-150microns (Fig. 1-2; [0021, 0025-0026, 0038]). Examples 4-5 teaches

forming the 4.5% EDA particulate composition with EDA drug of <10microns size and lactose monohydrate of 63-150microns ([0060, 0067], claims 1 and 8-11) (according to the limitations of instant claims 1, 4-7, 9-28 and 34-35).

- '518 teaches that the medicament is formulated as an inhalable medicament in a dry-powder inhaler containing the particulate composition ([0042]; claims 11-12) (according to the limitations of instant claims 71-72).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4-7, 9-28, 34-35 and 71-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,645,466 ('466) in view of Kurucz et al (Oct. 2003).

- '466 teaches a dry powder formulation for inhalation containing a pharmaceutically ineffective carrier of non-inhalable particle size and a finely divided pharmaceutically active compound such as a corticosteroid of inhalable particle size (abstract; col. 6, lines 20-22 and 64-col. 7, line 3). The pharmaceutically active compound of inhalable particle size is at most 10microns, in particular at most 5microns (col. 4, lines 60-62). The carrier of non-inhalable particle size is 10-500microns in size, preferably 50-200microns

(col. 7, lines 50-53) (according to the limitations of instant claims 1, 4-7, 9-28 and 71-72).

- The carrier of '466 includes lactose, sucrose, etc. and particularly preferred is lactose monohydrate (col. 8, lines 1-7) (according to the limitations of instant claims 34-35).
- '466 does not teach EDA but does teach corticosteroids such as budesonide (col. 6, lines 20).
- Kurucz et al teaches that EDA a soft-steroid is equipotent to budesonide, but surpassed the activity of budesonide in various areas and reduced the adverse systemic effects and adverse side effects typically caused by corticosteroids, since soft-steroids are quickly inactivated in the systemic circulation (abstract, p. 83 col. 1-2). The results show that both EDA and budesonide significantly attenuated peribronchial eosinophilia in the lungs, etc. but that EDA was more effective even at the lowest doses (pg. 86, col. 2, Figs. 2-4, also see pg. 87, col. 1-2; pg. 88, col. 1 and p. 91 col. 2 bottom sentence). According to Kurucz et al the need for a "perfect" steroid exists, one that decreases the risks of long term steroid use and EDA is superior in many aspects, statistically significantly more effective than budesonide, highly successful and indicates that EDA does not cause serious side effects (p. 90, col. 2-pg. 91).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine '466 with Kurucz et al. A skilled artisan would know how to substitute the budesonide active of the known product of '466 with the superior active

EDA of Kurucz et al with predictable results of a superior dry inhaled powder containing a <5micron sized drug EDA in combination with a 50-200micron size carrier of lactose monohydrate. Kurucz et al motivates a skilled artisan to make such a substitution for budesonide of '466, since Kurucz et al teaches that EDA is at least equipotent to budesonide but EDA surpassed the activity of budesonide and that EDA decreases the risk associated with inhaled steroids and lowers side effects. As such a skilled artisan would have a reasonable expectation of success in formulating the product of '466 with the active EDA of Kurucz et al with the predictable result of dry inhaled powder of EDA and lactose monohydrate with surpassed the activity, decreased the risk associated with inhaled steroids and lowered side effects.

Claims 1, 4-7, 9-28, 34-35 and 71-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,645,466 ('466) in view of Howes et al (Feb. 2003).

- '466 teaches a dry powder formulation for inhalation containing a pharmaceutically ineffective carrier of non-inhalable particle size and a finely divided pharmaceutically active compound such as a corticosteroid of inhalable particle size (abstract; col. 6, lines 20-22 and 64-col. 7, line 3). The pharmaceutically active compound of inhalable particle size is at most 10microns, in particular at most 5microns (col. 4, lines 60-62). The carrier of non-inhalable particle size is 10-500microns in size, preferably 50-200microns (col. 7, lines 50-53) (according to the limitations of instant claims 1, 4-7, 9-28 and 71-72).

- The carrier of '466 includes lactose, sucrose, etc. and particularly preferred is lactose monohydrate (col. 8, lines 1-7) (according to the limitations of instant claims 34-35).
- '466 does not teach EDA but does teach corticosteroids (col. 6, lines 20).
- Howes et al teaches that EDA is a corticosteroid which undergoes predictable metabolism to inactive metabolites after exerting its therapeutic effect, causing no or minimal corticosteroid related adverse effects (abstract). Howes et al shows that adverse systemic effects and adverse side effects occur with typical by corticosteroids, but that no such adverse effects were found for EDA (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine '466 with Howes et al. A skilled artisan would know how to substitute the corticosteroid active of the known product of '466 with the superior corticosteroid EDA of Howes et al with predictable results of a superior dry inhaled powder containing a <5micron sized drug EDA in combination with a 50-200micron size carrier of lactose monohydrate causing no or minimal corticosteroid related adverse effects. Howes et al motivates a skilled artisan to make such a substitution for corticosteroid of '466, since Howes et al teaches that EDA causes no or minimal corticosteroid related adverse effects. As such a skilled artisan would have a reasonable expectation of success in formulating the product of '466 with the active EDA of Howes et al with the predictable result of dry inhaled powder of EDA and lactose monohydrate causing no or minimal corticosteroid related adverse effects.

Cited As Interest

"Loteprednol etabonate" from Chembase-chemical compounds database shows the correct structure of the compound (pg. 1).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bethany Barham whose telephone number is (571)-272-6175. The examiner can normally be reached on Monday to Friday; 8:30 a.m. to 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Wax can be reached on (571)272-0623. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bethany Barham/
Examiner, Art Unit 1615